Maine Public Utilities Commission

Report on the Community-based Renewable Energy Pilot Program

Presented to the Joint Standing Committee
on Energy, Utilities and Technology

January 15, 2017

I. INTRODUCTION

During the 2009 session, the Legislature enacted An Act To Establish the Community-based Renewable Energy Pilot Program (Act).[1] Part A of the Act established a community-based renewable energy pilot program, to be administered by the Commission, to encourage the sustainable development of community-based renewable energy projects.[2] In summary, the Act provided incentives, on a pilot program basis, for the development of community-based renewable projects.

The Act requires the Commission to provide biennial reports to the Legislature on the pilot program.[3] Specifically, the Act provides:

> The Commission shall develop and administer a system to register and track the development of community-based renewable energy projects and by January 15, 2011 and biennially by January 15th thereafter shall report to the joint standing committee of the Legislature having jurisdiction over utilities and energy matters on the program and the development of community-based renewable energy projects. The report must include, but is not limited to:
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> **1. Community-based renewable energy development.** Documentation of the progress of community-based renewable energy development, including the number of community-based renewable energy projects in the State, the generating capacity of those projects and the kilowatt-hours of electricity purchased from community-based renewable energy projects; and
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> **2. Program implementation; assessment; recommendations.** Actions taken by the Commission to implement the program, an assessment of the effectiveness of the program with respect to encouraging the sustainable development of community-based renewable energy in the State and recommendations, including any necessary implementing legislation, to improve the program.

The Commission hereby submits this report to the Energy, Utilities and Technology Committee on the status of the community-based renewable energy pilot program.

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[1] P.L. 2009, Ch. 329.

[2] 35-A M.R.S. §§ 3601-3609.

[3] 35-A M.R.S. § 3607.

II. OVERVIEW OF THE PILOT PROGRAM

As stated above, the Act provides incentives, on a pilot program basis, for the development of community-based renewable projects. The Commission has provided a detailed description of the pilot program in the reports to the Committee submitted in 2011, 2013 and 2015 and summarizes the key aspects of the program here. The projects must generate electricity from an eligible renewable resource, which includes: fuel cells; tidal power; solar, wind and geothermal installations; hydroelectric generators; generators fueled by landfill gas; and biomass generators whose fuel includes anaerobic digestion of agricultural products, byproducts or wastes. These projects must be "locally owned electricity generating facilities," which means that 51% or more of the facility must be owned by "qualifying local owners." The facilities must not exceed 10 megawatts (MW) and no single transmission and distribution service territory may exceed 25 MW of installed capacity unless approved by the utility and the Commission. Pursuant to the Act and Chapter 325 § 3(A) of the Commission's rules, the total installed generating capacity of all program participants in the pilot program combined may not exceed 50 MW. The Act stated that the pilot program would terminate on December 31, 2015.

Once qualified as a community-based renewable energy project, the participant has the option to elect one of two incentive mechanisms: 1) a long-term contract for the output of the project with one of the investor-owned transmission and distribution utilities; or 2) a renewable energy credit (REC) multiplier (in which the value of the REC is 150% of the amount of the produced electricity). The participant may elect a contract for up to 20 years at prices based on the cost of the facility up to 10 cents per kilowatt-hour (kWh), a price that is significantly above the market price of power. The Act directed the Commission to conduct a competitive solicitation for projects that are one MW or greater. For projects that are less than one MW, the Act required the Commission to establish by rule prices for wind power installations, solar arrays, and other resource types upon request. In the event a participant chooses the REC multiplier, RECs associated with the project would have a value that is fifty percent greater than the market value for RECs eligible to satisfy Maine's renewable resource portfolio requirement.

III. COMPETITIVE SOLICITATIONS

The Act required the Commission to conduct a competitive solicitation for long-term contracts for projects that are one MW or above. On April 28, 2011, the Commission issued a request for proposals (RFP) for community-based renewable energy projects. On October 14, 2011, the Commission approved 20-year long-term contracts for three community-based projects: Jonesport Wind, Lubec Wind, and Pisgah Mountain Wind.[4]

On March 21, 2013, the Commission issued a second request for proposals for community-based renewable energy projects and, on May 28, 2013, the Commission

[4] Docket No. 2011-00150.

approved a contract with the re-sized 9.6 MW Jonesport Wind project and with a planned 2 MW expansion of the Exeter Agri-Energy anaerobic digester project.[5]

On August 27, 2013, the Commission approved twenty-year contracts for two community-based renewable energy projects: Maine Woods Pellet and Shamrock Partners.[6]

IV. PROGRAM CHANGES MADE DURING 2015 LEGISLATIVE SESSION

During the 2015 session, the Legislature enacted an Act to Amend the Community-based Renewable Energy Pilot Program.[7] This Act directed the Commission to review all certified program participant projects that had not yet reached commercial operations to determine whether the projects are reasonably likely to achieve commercial operations within a 3-year period and, to the extent there is capacity remaining under the 50 MW statutory cap, to conduct an expedited RFP to select community-based renewable energy projects to become program participants and enter into long-term contracts. The Act also provided that those projects that selected the renewable energy credit multiplier do not count towards the 50 MW statutory cap and that all projects must become operational by December 31, 2018.

The Commission completed its viability assessments and, on September 24, 2015, determined that a number of projects were likely to achieve commercial operations before December 31, 2018 and would, therefore, retain their prior contract awards.[8] The Commission identified approximately 21 MW of capacity available for contract awards and, on September 30, 2015, issued a RFP for community-based renewable energy proposals.[9] Proposals were received on November 6, 2015 from projects that represented a range of generating resources. On December 22, 2015, the Commission made contract awards to 1) Clear Energy, LLC and Cianbro for a 9.9 MW solar array in Pittsfield, Maine, 2) Georges River Energy, LLC for a 7.5 MW biomass plant in Searsmont, Maine 3) Mayo Mill LLC for a 310 kW hydro plant and 85.68kW solar array in Dover-Foxcroft, Maine and 4) Shamrock Partners, LLC for a 1.0 MW wind generator in Limestone, Maine.

V. PROGRAM AND PROJECT DEVELOPMENT STATUS

As noted, the Commission's authority to award contracts expired at the end of 2015. By the end of 2015, the Commission had awarded contracts to projects totaling approximately 47.5 MW of capacity across the State and had certified projects that elected the REC multiplier totaling an additional 5 MW. Over 40% of the projects are operating, with the remainder expected to reach commercial operations by the end of 2018. The following table lists the participating projects and their status as of the end of 2016.

[5] Docket No. 2013-00207.
[6] Docket No. 2013-00207.
[7] PL 2015, Ch. 232
[8] Docket No. 2013-00385
[9] Docket NO. 2015-00299

Project Name	Resource	Contract Size (MW)	Contract Price/kwh	Contract Award Date	REC Multiplier	Operating?
Athens Energy	biomass	7.10	$ 0.0990	5/28/2013	-	yes
Clear Energy, LLC/Cianbro/Pittsfield Solar	solar PV	9.90	$ 0.0845	12/22/2015	-	2017
Exeter Agri-Energy	anaerobic digestion	0.98	$ 0.1000	Note 1	-	yes
Exeter Agri-Energy (Expansion)	anaerobic digestion	2.00	$ 0.0850	5/28/2013	-	2018
Fox Islands Wind, LLC	wind	-	-	-	4.50	yes
Georges River Energy, LLC	biomass	7.50	$ 0.0990	12/22/2015	-	2018
Good Will Hinckley School	solar PV	-	-	-	0.03	yes
Goose River Hydro, Inc.	hydro	0.38	$ 0.1000	Note 1	-	yes
Jonesport Wind Power, LLC	wind	9.60	$ 0.0850	5/28/2013	-	2018
Lewiston-Auburn Water Pollution Control Authority	anaerobic digestion	-	-	-	0.46	yes
Mayo Mill, LLC	solar PV and hydro	0.39	$ 0.1000	12/22/2015	-	yes
Pisgah Mountain, LLC	wind	9.00	$ 0.0930	10/14/2011	-	yes
ReVision Energy, LLC/Riding to the Top Stables	solar PV	-	-	-	0.03	yes
ReVision Energy, LLC/Unity College	solar PV	-	-	-	0.04	yes
Shamrock Partners, LLC	wind	1.00	$ 0.0830	12/22/2015	-	2018
Total		47.85			5.06	

Note 1: Projects that are less than 1 MW are not required to participate in a competitive solicitation. Once certified, these projects simply request that a contract be executed at a price established by the Commission.

All of the projects that have elected the REC multiplier incentive have been constructed and are in commercial operation. Of the certified projects electing the long-term contract incentive mechanism, the Exeter Agri-Energy project (March 2012), the first phase of the Goose River project (August 2014), Athens Energy (November 2016) and Pisgah Mountain (December 2016) have achieved commercial operation. To date, ratepayers have borne the above market costs of the first two projects to have become operational, the Exeter Agri-Energy project and the 70 kilowatt (kW) Goose River installation, which are estimated to total approximately $500,000 annually. As more projects achieve commercial operations, the ratepayer impact is expected to grow, since contracts awarded under this program are allowed to be at prices substantially above current wholesale market prices.

Although, in the past, the Commission has noted delays[10] that affected construction schedules, several of the larger projects have overcome those delays and achieved commercial operations in late-2016. Additionally, the Commission is aware that several additional projects have begun construction activities that should lead to completion before the end of 2018 as required by statute.

VI. CONCLUSION

The community-based renewable energy pilot program began slowly with few projects reaching commercial operations in the first several years of the program. Currently, the program's incentives are supporting the development of a variety of projects of different sizes, technologies, location, and contracted price. A total of 15 projects are participating in the Community-Based Pilot Program, electing either the REC multiplier incentive or a long-term contract. Of that total, 10 projects are in commercial operation.

[10] Such delays have included land-use appeals, difficulty in completing financing arrangements, difficulty of identifying tax-equity investors that meet the qualifying local owner requirement, and challenges in completing local siting requirements.

The costs of the program, in terms of above-market costs that are borne by ratepayers, will depend on the number of projects that reach commercial operations and their operational characteristics. Based on current wholesale market prices for electricity and assuming that all projects are able to reach commercial operations and run as anticipated, the annual cost to ratepayers would be in the range of $11-12 million.

The community-based renewable energy pilot program has shown that long-term above-market electricity contracts can result in the development of smaller renewable generation projects. The Commission notes that the program MW (50 MW) and price (10 cents/kWH) caps serve to place a limit on the total amount of above-market costs that could be borne by the State's electricity ratepayers. Although most of the contract prices were at or only slightly below the program cap of 10 cents/kWh, the additional statutory requirement that the Commission ensure that any contracts authorized did not exceed the cost of the project plus a reasonable rate of return on the developer's investment allowed the Commission the opportunity for an additional check on the potential for over-earning by bidders. As a practical concern, however, conducting this check raised questions regarding the source of project cost information (which was provided by bidders), the calculation of investor returns on tax-incented investments and the market reasonableness of a calculated return.

The Commission's experience implementing the program revealed that the qualifying local ownership requirement, requiring that 51% of the project be owned by Maine residents or Maine corporations, resulted in significant difficulty for some developers seeking to take advantage of innovative financing opportunities, such as tax equity financing, that could lower overall project costs.

Finally, as previously noted, although a number of long-term contracts have been executed, approximately 30 MW of the 50 MW program has not yet reached commercial operations. We expect these projects to reach their commercial operations milestone by the end of 2018. Further data and information will become available during this period that may have bearing on any final conclusions regarding the pilot program.